

numbers, and hence the actual data of these pages are sent to the data display control unit 187 in succession. Once the operator sees a desired page, he inputs a page-turning suspension instruction into the input signal reading unit 181.

The indexes may be aligned more than one line; yet the page can be opened using the function and the coordinate of the designated point in the same way as above.

The Y coordinate is used in this embodiment; however, an X coordinate may be used instead. For example, an index E is opened with the X coordinate when the point 193 is designated.

Although the present invention has been fully described by way of example with reference to the accompanying drawings, it is to be noted that various changes and modification will be apparent to those skilled in the art. Therefore, unless otherwise such changes and modifications depart from the scope of the present invention, they should be construed as being included therein.

What is claimed is:

1. A page-retrieval apparatus comprising: means for storing document image data; means for designating a document image to be displayed; a first display means for displaying the designated document image on a screen by reading out corresponding document image data from the document image data storing means; means for counting the number of display times for each document image; means for generating number-of-display times

a second display means for displaying the number-of-display times image data on the screen, wherein the color shading indicates the number of display times for each document image.

2. The apparatus of claim 1 further comprising:

means for storing a total page number of a document stored in the document image storage means;

means for determining a relative location of a currently displayed page within the document using the total page number and a page number of the currently displayed page;

means for generating relative-location image data for the determined relative-location; and

a third display means for displaying a relative-location image on the screen at the same time that a corresponding document image is displayed, the relative-location image indicating the determined relative location, wherein the document image storage means stores the document image data in relation with their respective page numbers.

3. The apparatus of claim 2, wherein:

the first display means displays the designated document image in a two-page spread electronic-book;

the second display means displays the number-of-display times image on a corresponding page in the electronic-book; and

the third display means indicates a relative location of a currently displayed page by displaying a first page to the currently displayed pages by a thickness in one of the right and left side, and displaying a following page to a last page by a thickness on the other side.

4. The apparatus of claim 3 further comprising:

display-sequence-rule holding means for holding a rule that determines a document image display sequence, wherein the designating means reads out the rule from the display-sequence-rule holding means to designate a document image under the rule.

5. The apparatus of claim 4, wherein the rule is to display document images in a order of the number of display times.

6. The apparatus of claim 5 further comprising:

means for storing a page number of each document image together with coordinates of respective document images on the screen;

means for storing the number of display times per document image together with their respective page numbers;

means for specifying a point in a vicinity of the relative-location image of a page to be displayed;

means for determining a page number corresponding to the specified point by reading out a coordinate from the coordinate storage means; and

means for reading out the numbers of display times for a plurality of pages contained in a certain range from the determined page from the number-of-display times storage means,

wherein the designating means designates document images under the display-sequence-rule using the read out numbers of display times.

7. The apparatus of claim 6 further comprising: means for displaying a mark image along with a page, the mark image being displayed based on mark image data and emphasizing the page in an electronic-book;

means for generating the mark image data; and

means for controlling the mark image display means.

8. The apparatus of claim 7 further comprising:

means for measuring a display interval for a document image,

wherein the number-of-display times counting means updates the counting value only when the display interval exceeds a predetermined period.

9. The apparatus of claim 4 further comprising: means for storing a page number of each document image together with coordinates of respective document images on the screen;

means for storing the number of display times per document image together with their respective page numbers;

means for specifying a point in a vicinity of the relative-location image of a page to be displayed;

means for determining a page number corresponding to the specified point by reading out a coordinate from the coordinate storage means; and means for reading out the numbers of display times for a plurality of pages contained in a certain range from the determined page from the number-of-display times storage means,

wherein the designating means designates document images under the display-sequence-rule using the read out numbers of display times.

10. The apparatus of claim 9 further comprising:

means for displaying a mark image along with a page, the mark image being displayed based on mark image and emphasizing the page in an electronic book;

means for generating the mark image data; and

means for controlling the mark image display means.

11. The apparatus of claim 10 further comprising:

means for measuring a display interval for a document image,

wherein the number-of-display times counting means updates the counting value only when the display interval exceeds a predetermined period.

12. The apparatus of claim 3 further comprising:

means for storing a page number of each document image together with coordinates of respective document images on the screen;